2.2 Practice

2.2.1 Critical reading

Critical reading starts with getting a first impression. This first impression is built on a number of factors, including the red flags discussed in 1.1.2. If many red flags are identified, the text needs to be read with a lot of caution. If the use of language is precise, evidence is provided and clear arguments are built on this evidence, this should give us more confidence in the information. Thus, this initial assessment should already detect the most obvious forms of pseudoscience. However, sometimes pseudoscience is subtle, even clever and harder to detect. In such cases it requires further examination. Such examination should include a closer look at the scientific methods used. The skill required is called critical reading. Critical reading is an analysis that does not take the given text at face value, but involves a deeper examination of the claims put forth. It also involves assessment of the supporting points and possible counterarguments.

The ability to reinterpret and reconstruct for improved clarity and readability is also a component of critical reading. The identification of possible ambiguities and flaws in the author's reasoning, in addition to the ability to address them comprehensively, are essential to this process. Critical reading, much like academic writing, requires the linkage of evidential points to corresponding arguments.

- What study design was used? The most rigorous experimental design is a so-called cross-over design. This means that the same person performs both the treatment trial and the placebo trial, allowing comparisons to be made within that person. Let's consider a study aimed at comparing the effects of a carbohydrate drink versus water on performance. Instead of giving a person carbohydrate and another one water, and measuring 10k running performance, the experiment leaders will ask both people to perform two 10k runs; one with carbohydrate and one with water. It is easy to see from this example how the cross-over design would produce more reliable and meaningful results.

- Was the study placebo controlled? It is well known that if someone believes that a treatment works, the chances are greater that the treatment will be effective. If subjects have prior knowledge or expectations with respect to a treatment or nutritional intervention, their performance could be affected. It is therefore important that the subjects in a study are unaware of the treatment group they are in. In the above example it is important to mask whether we would be getting carbohydrate or water. Drinks should look the same, smell the same, taste the same. The only difference should be the carbohydrate content. The proper choice of a placebo avoids this kind of bias.

- Were the trials randomized? Randomization reduces the confounding effects of variables that were not controlled or could not be controlled. For example, if you did a memory test twice, the first time after drinking water, the second time after drinking nothing, you would probably find that the task would be performed better without water. The conclusion could be that drinking water deteriorates memory. However, the more likely explanation is that the second test is always a little better than the first one as a result of a learning effect. This effect is totally independent of drinking water or no water. Failure to randomize treatments in a study may confound the outcome and hence make any conclusions untrustworthy.
- Was it a random assignment or was self-selection used? If subjects are allowed to self-select their trial group, a significant bias may be introduced. For example, in a study of the effects of the micronutrient chromium on weight loss, subjects most motivated to lose weight would likely choose to be in the chromium group and not the placebo group.
- Were external variables controlled? In an ideal study, all variables and conditions are identical, so that the only difference between the trials is the treatment each group receives. Then, all observed changes can with reasonable certainty be attributed to the treatment. For example, if the effect of caffeine on exercise performance is examined, and the environmental conditions were different in the caffeine and control trial, the observed effects might be related to environmental conditions as much as to caffeine. (Jeukendrup & Gleeson, 2018, pp. 296-297).
- Do other studies confirm the findings? This point was already discussed. If one study reports an ergogenic effect of a supplement, it may be true. However, if several studies come to the same conclusion, the supplement

most likely does have an ergogenic effect. The more studies that have been conducted, the larger the variety of subjects tested, and the more varied the dosages of the supplement used, the more generalizable the conclusion is. (Jeukendrup & Gleeson, 2018, p. 297).

- Validity If something works in a test tube, it doesn't mean it will help and athlete in competition. Was the study on cells, muscle, animals, or humans? Often

> results are extrapolated from findings in cell cultures. These in vitro experiments greatly help our understanding of metabolism and molecular interactions. However, in vivo situations may be very different. For instance, test tube samples are not exposed to hormonal changes that exist in living organisms. Also, muscle cells in the body may behave differently than isolated muscle cell preparations. Even if living animals are tested, the metabolism of animals may be very different from the metabolism of humans. Rats have relatively large stores of muscle glycogen and very small stores of intramuscular triacylglycerol compared with humans. High-fat diets in rats clearly improve exercise capacity. However, no evidence indicates that high-fat diets improve performance in humans. Thus, results from different types of studies cannot simply be extrapolated to the human athlete. (Jeukendrup & Gleeson, 2018, pp. 296)

- In what population was the study done? "Was the population for which claims are made comparable to the population in the study?" (Jeukendrup & Gleeson, 2018, p. 296) Or where results extrapolated? For example, the popular supplement Coenzyme Q10 is claimed to improve oxygen uptake in athletes. This is based on the observation in a couple of studies that oxygen uptake and exercise capacity in cardiac patients was improved. However, when healthy individuals were studied with much better exercise capacity, there was no effect of supplementation on any of the variables measured, including oxygen uptake and performance. Another example:

> Vanadium supplementation increases insulin sensitivity (reduces insulin resistance) in patients with type II diabetes but does not seem to be effective in healthy individuals with normal insulin sensitivity. These examples show how outcomes can differ in a target group

that has different ages, sexes, body compositions, or fitness levels than the study group. (Jeukendrup & Gleeson, 2018, p. 296).

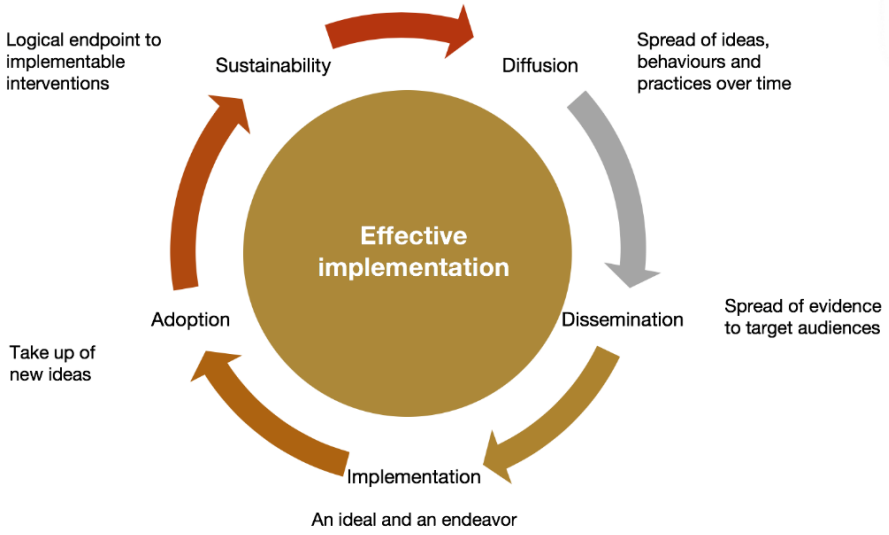
- **Was the study peer reviewed?** Papers sent for publication to peer-reviewed journals undergo a rigorous process whereby usually 2 or 3 referees, who are experts in the area, evaluate the paper based on specific criteria. Quality research withstands the critical review and evaluation by colleagues. Articles published in popular magazines or on consumer-oriented Web sites do not undergo this extensive review process and are, therefore, often contain errors, invalid methodologies and unfounded claims. (Jeukendrup & Gleeson, 2018, p. 297).

2.2.2 Implementation of a strategy at organisational level

When working as a practitioner there are at least 2 levels at which the implementation needs to be considered for it to be successful. The first one is at an organisational level, the second one is at a personal level when working with players/athletes. Some of these have to do with the environment and some with communication. In this section we will discuss successful implementation at the organisational level, and in the next section implementation at the individual level.

In Figure 1 the interrelationships among the core concepts of successful implementation of a strategy within a club environment are depicted.

Figure 1: Effective implementation of interventions



Source: Prepared by the author

"Diffusion... is the notion that ideas, behaviours, and practices spread out over time in a relatively unfocused way, through informal and formal communicative channels." (Rapport et al., February 17, 2018, p. 118). Diffusion is "relatively passive... [and] little targeted planning takes place." (Rapport et al., 2018, p. 118).

> "'Dissemination' is 'an active approach to spreading evidence-based interventions to the players via determined channels using planned strategies.' The 'planned' and 'targeted' components of dissemination are often underpinned by strategic thinking about how to reach [the players group as] efficiently and effectively, and in the least possible time." (Rapport et al., 2018, p. 118).

Implementation. In an ideal world implementation takes "research evidence and applies it to practice." (Rapport et al., 2018, p. 118). Implementation often means that research is translated into "implementable procedures" (Rapport et al., 2018, p. 118). It is important to recognize that the implementation of these procedures does not happen automatically, often implementation happens "to no great extent, and sometimes not at all." (Braithwaite, Marks, Taylor, & Harnessing, as cited in Rapport et al., 2018, p. 118). However, when implementation is successful, it can affect the whole organisation, positively improving practice and optimizing athlete care (Rapport et al., 2018).

Diffusion, dissemination and implementation are really the same thing on a continuum, where diffusion is the most passive and least organised form and implementation is the most practical, orchestrated form.

"'Adoption' is the degree of uptake of new ideas, behaviours, practices" (Rapport et al., 2018, p. 119) plus roles and responsibilities. Adoption is not just to the players who adopt a new behaviour, but it also refers to support staff adopting various practices that are part of the implementation. Resources at the disposal of those wishing to implement the new strategy are often essential to success. "These include the material resources, the aptitudes of staff, and 'the policies and incentives, networks, and linkages' that affect how information is used by adopters." (Rapport et al., 2018, p. 119).

"'Sustainability' is the logical endpoint of implementable interventions, once new knowledge and the intervention have been successfully applied and embedded." (Rapport et al., 2018, p. 119). It is important that it is sustainable. It is important to create a "feedback loop" (Rapport et al., 2018, p. 119) that demands implementing, adoption and monitoring so that

with each cycle, the intervention becomes more firmly entrenched within a system. “However, for something to be sustainable, it is not enough to just measure the success of its evidence base. It also needs to take account of the real world environment setting.” (Rapport et al., 2018, p. 119). How practical are the changes? How much extra effort does it require? Will people involved stay motivated? This practical aspect of sustainability is critical. Recognising the demands of different sporting environments and their complexities is key to coming up with plans for sustainability. It also helps with understanding the resources necessary “to sustain uptake” (Rapport et al., 2018, p. 119) as well as “the initial commitment necessary for people to get involved in the first place.” (Rapport et al., 2018, p. 119).

For this particular section, the starting point is a vision. The vision needs to be clear to everyone and everyone needs to support this vision. A vision is a picture of what an organisation could and should be. A vision is aspirational and should be inspiring. A great vision is something that is easy for people to understand. A vision statement can usually be written in a half page and can be explained or communicated in 60 seconds. A great vision is intellectually solid and it also establishes an emotional connection. A broad range of people should be able to understand it. The vision should be clear and appealing to senior management and it should support staff or players. If the vision is easy to communicate and can be communicated in a way that people will “get it,” others will communicate it for you and you will get more buy in Once the vision is clear and well communicated, the next step is guidelines.

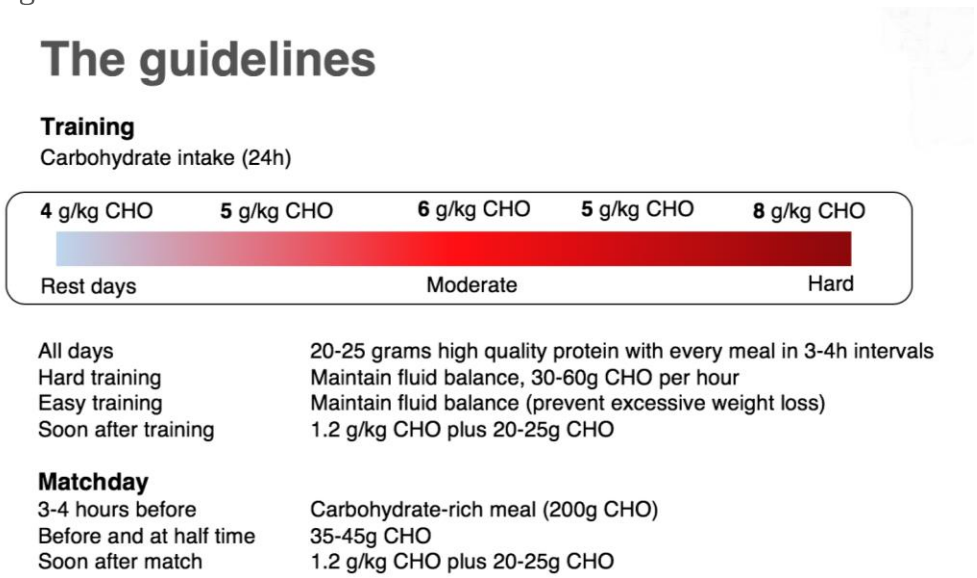
It is important to have a set of guidelines and rules to work from. Essentially, this is the evidence base that underpins all future activity. This evidence will evolve and needs to be updated at regular intervals. Not too often because frequent change is not desired when trying to implement new practices. All stakeholders need to understand the evidence base or at least need to understand the guidelines. There needs to be a document where people can find what the guidelines are and how these were derived, explaining the evidence they were based on. This can be an existing document (like ACSM guidelines, FIFA guidelines, UEFA gudielines, etc) or they can be developed specifically. For example, at FC Barcelona guidelines were first established in 2014 and these were revised and updated in 2017.

The existence of these guidelines creates total transparency for everyone within the team. If there is a question, one can always refer back to this document.

A summary of some of the guidelines is depicted in Figure 2. Daily carbohydrate intake should be on a sliding scale from 4-8 g/kg depending on the physical activity levels on the day. Protein intake is fairly consistent

but is spread out throughout the day with each meal containing a minimum of 20g high quality protein, etc. Having these guidelines is a critical starting point but is certainly not the end point.

Figure 2: Guidelines from FC Barcelona



Source: Prepared by the author

Similarly, it is important to define policy around other nutritional issues to make sure that everyone within the team sticks to the same rules. A very obvious example is a policy around the use of supplements. What supplements are allowed, who prescribes them, what is the decision process, who is responsible, etc.

Next, these guidelines need to be implemented. Meals have to be those that deliver the nutrient targets. Meals have to be provided at the intended times and foods have to be available when they are needed. This requires planning and coordination.

In an elite sports environment, conversions from nutrient targets to foods is done by a qualified sports dietitian or performance nutritionist. A chef is then responsible for the preparation of meals. It is often important to create a simplified and convenient system that helps with communication. One approach could be to have 3 or 4 categories of meals that deliver different amounts of nutrients. Some meals are meant to replenish carbohydrate rapidly and provide a high-quality protein source. Other meals have a low energy (carbohydrate) content and focus more on the delivery of micronutrients.

Once there is a selection of meals into a number of categories it is important to establish the communication with the trainer to understand the nutrition requirements. Estimations of glycogen use are important here. Next, strategic meal planning will provide a periodised week

nutrition plan and this plan can be shared with the chef who can fill in the week plan with meals and prepare them. The better the communication between trainer and dietitian, the better the communication between dietitian and chef, the better the meals will be adapted to the needs.

This approach is only possible in a controlled environment. Once players have to find their own meals and make their own decisions this becomes more difficult. In that case education becomes the most important tool. Education may be the preferred method of choice, especially where it targets behaviour change.

2.2.3 Implementation of a strategy at individual level

Ultimately we want to achieve behaviour changes in athletes. So if we want to be effective practitioners we will need to be able to change the behaviour of our athletes. We are moving into a different territory here that is not our expertise but we will share some experiences and the expertise of others. The questions we will try to address in the section below is: what does it take to be effective as a practitioner?

It is well known that changing human behaviour is very difficult

Why is it so difficult to change people's behaviour? Maybe it is because they don't know what the guidelines are? Or maybe they don't know which foods they should choose? They don't know what food contains carbohydrate or protein? This is definitely a factor but it is not the only factor. Players know that fast food is not as good as fresh food, they know that they should probably eat more fruit and vegetables and fewer burgers, hotdogs, high caloric snacks with little nutritional value.

Effectiveness as a practitioner depends on gaining trust from the players. We know that trust needs to be earned, it is not a given from day one. On day one you are a stranger, people don't know much about you and thus they don't know if they can trust you. Over time they will learn more about you and trust can develop… or a lack of trust can develop. Trust is the foundation of strong relationships. Without trust, any relationship is weak. Trust is a feeling and therefore it is difficult to quantify and to control. There is one tool particularly helpful in understanding and even measuring trust: the trust equation. The Trust Equation was first introduced in 2000 by David Maister, Green, and Galford's book, *The Trusted Advisor* (2000). It was a book written for business and businessmen who work with advisors, the ultimate advisor being the "trusted advisor". In this book, the author described that you can break down trust in a number of components and the trust equation explains the feeling of trust. "If you understand this equation, you can use it to help drive your decision-making." (Yapp, October 22, 2015, https://goo.gl/MgqkD8). The 4

components of this equation are: credibility, reliability, intimacy, and self-orientation (Yapp, October 22, 2015).

Although we discuss trust here under the heading "individual level", it actually applies to all levels. Gaining trust means that you do well in all four dimensions (in the client's eyes), unless you are superb in one or two dimensions that you can overcome some relative weakness in the others. You will have to be superb, not just good.

Credibility

"Credibility" is very important. It is the foundation of building trust. Credibility comes with knowledge, being able to answer questions and showing that you understand the sport. The good news of this driver is that this is 100% controllable by you. Someone with a good track record often starts with a good perceived credibility and this makes it easier to get off to a good start. It usually takes a long tome to build up credibility but it is important to realize that it can be lost very quickly. Credibility is in the details. If you give a presentation and use older irrelevant photos, or show the wrong photos at the wrong times this can damage credibility. So doing your homework on the sport, the rules, the team you are working with, and the people involved is crucially important.

"Credibility is not just content expertise. It is content expertise plus "presence", which refers to how you look, act, react and talk about your content. It depends not only on the substantive reality of the expertise but also the experience" (Maister, Green, & Galford, 2000, p. 71) of the client (player).

Here are some helpful tips from the book *The Trusted Advisor*:

- Figure out how to tell as much truth as possible, except where doing so would injure others.
- Don't ever tell lies, or even exaggerate. At all, ever!
- Avoid saying things that others might construe as lies.
- Speak with expression, not monotonically. Use body language, eye contact and vocal range. Show the client you have energy around the subject at hand.
- Don't just cite references.
- When you don't know, say so, quickly and directly
- Yes, it is important to have them know your credentials. It will make them feel better and it will make you feel better. In some cases, you can get someone they already trust to introduce you.

- Relax. You know much more than you think you know. If you don't really belong there, don't put yourself there in the first place.
- Make sure you have done absolutely all your homework in the client, the sport, the environment and make sure this is up to date.
- There is no reason to show off.
- Love your topic. It will show. (Maister et al., 2000, pp. 73-74).

What we want players to say is, "I can trust what he/she says about sports nutrition; he/she knows his stuff."

Reliability

The second part of the 3 drivers is *reliability*. Often nutritionists who promise the world, deliver very little. "If we say we will get a plan to someone by the end of the week make sure we have it done by mid-week" (Close, February 26, 2017, https://goo.gl/DUMEQi). Do not promise things you will not be able to deliver! If you need time to get a report together, for example, explain that it takes time and provide a realistic time frame. This, "set realistic expectations: under promise and over deliver. It does not take a lot to be seen as unreliable and once you are seen as unreliable it is very hard to change this perception." (Close, February 26, 2017, https://goo.gl/DUMEQi).

Again here are a few pointers from *The Trusted Advisor* book:

- Make specific comments to your clients around small things: getting that article by tomorrow, placing a call to another expert, finding out about a sports nutrition product, providing a list of suitable snacks, etc etc. and then deliver them, quietly and on time.
- Set expectations in advance and give the player a chance to prepare themselves for a meeting. But only do meetings if absolutely necessary, many things are best discussed in less formal settings.
- Make sure you set clear goals with each player and endure those goals are met. Make sure the goals are realistic and tangible.
- Use the clients "fit and feel" around terminology, style, formats and hours.
- Review agendas with clients. Always solicit their views on how time will be spent.

- Reconfirm scheduled events before they happen. Announce changes to scheduled or committed dates as soon as they change. (Maister et al., 2000, p. 75)

What we want players to say is, "If he/she says he/she'll deliver the product tomorrow, I trust him/her, because he/she's dependable."

The 3rd driver is called "**intimacy**".

> These are the soft skills which are hard to teach. How well do you listen, do players warm to you, can you sense the mood? Sometimes players will simply not be in the mood for a conversation and it is your job to sense this and act accordingly. (Close, February 26, 2017, https://goo.gl/DUMEQi).

This is all part of being a great communicator. Sometimes a great communicator, does not say anything. Other times, a great communicator can sense what is important to the player, can place him/herself in the players position and understands what is going on in their minds. It is believed this ability comes with experience so get out there and work with athletes to develop your intimacy skills. "Establishing intimacy is playing a "game" of mutually increasing risk. One party offers a piece of himself or herself and the other party either responds (thereby deepening intimacy), or chooses not to respond (thereby drawing an intimacy line)." (Maister et al., 2000, p. 77). This may mean sharing personal thoughts and experiences get shared. It does not necessarily mean that private lives are shared. Intimacy is the most common and also most effective way of building trust. "People trust those with whom they are willing to talk about difficult topics (intimacy) and those who demonstrate that they care (low self-orientation)." (Maister et al., 2000, p. 77).

Here are some pointers:

- "Be not afraid! Creating intimacy requires courage, not just for you but for everyone. It is not different from intimate relationships in your life…" (Maister et al., 2000)
- Candour. Speak open and avoid speaking with politics in mind.
- "Find the fun and fascination. By getting closer to the emotional components of the client's decision making, we can ask people questions" (Maister et al., 2000)It shows that we can approach things from a different angle or a different point of view. It is fun for both sides.
- "Test whether you are coming too close or pushing too far, too fast." (Maister et al., 2000) Ask yourself, if you were on the player's

position, would you be happy to talk about the topic with someone you trusted? If the answer is yes, you are on a right path but you still have "to make sure that it's the right topic, right time, and right phrasing of the question." (Maister et al., 2000).

- "Practice a little." (Maister et al., 2000, p. #). Although you cannot practice spontaneity, "you can practice phrasing." (Maister et al., 2000). Maybe write down two or three questions or messages that are difficult to deliver and try them before using them.
- "One of you has to make the first move. And It's you!" (Maister et al., 2000, p. #). Increased intimacy starts with one person opening up and sharing something personal. If this risk is taken, intimacy is increased. "Accept responsibility for being the first risk-taker." (Maister et al., 2000).

What we want players to say is, "I can trust him/her with that information; he/she's understands me and has never violated my confidentiality."

Self-interest. The athlete needs to get the feeling that you care! You care deeply about his/her wellness and his/her performance and you should do so. So providing prepared answers and solutions for problems you think the player may have. This is more about showing off that you have all this knowledge, it makes you feel good, not the player!

What will help the player is if you show that you care, you ask questions, you have conversations about the things that are important to them (not the things you think are important). This is about the player, not about you. Conversations about how you are, how the kids are, how your break was, or how your leg is doing will be much more valuable than: let's talk about your body fat! Working on these soft skills is crucial. What we want players to say is, "I trust him/her because he/she really cares about me and would do anything to help me". Very often what we hear is, "all he/she wants is running around in our team kit", "all he/she wants is to post pictures with me on social media".

Table 1: some do's and don'ts:

Avoid	Do
"Selfishness" (Maister et al., 2000)	"Letting the client fill in empty spaces" (Maister et al., 2000, p)
"Self-consciousness" (Maister et al., 2000)	"Asking the client to talk about what is behind the issue" (Maister et al., 2000)
"A need to appear on top of things" (Maister et al., 2000)	"Using open ended questions" (Maister et al., 2000)
"A desire to look intelligent" (Maister et al., 2000)	"Not giving answers until right is earned to do so (and the client will let

	you know when you have earned it)" (Maister et al., 2000)
"A to do list on your mind that is a mile long" (Maister et al., 2000)	"Focussing on defining the problem, not guessing the solution" (Maister et al., 2000)
"A desire to jump to the solution" (Maister et al., 2000)	"Reflective listening, summarizing what we've hear to make sure we heard correctly what was said and was intended" (Maister et al., 2000)
"A desire to win that exceeds the desire to help the client" (Maister et al., 2000)	"Saying you don't know when you don't know" (Maister et al., 2000)
"A desire to be right" (Maister et al., 2000)	"Acknowledging the feelings of the client (with respect) " (Maister et al., 2000)
"A desire to be seen right" (Maister et al., 2000)	"Learning to tell the clients story before we write our own" (Maister et al., 2000)
"A desire to be seen as adding value" (Maister et al., 2000)	"Listening to clients without distraction: door closed, phone off, email not ion lien of sight, frequent eye contact" (Maister et al., 2000)
"Fears of various kinds: of not knowing, of not having the right answer, of not appearing intelligent, of being rejected" (Maister et al., 2000)	"Resisting with confidence a client's invitation to provide a solution too early on – to stay listening and phases of discussion where problem are defined jointly" (Maister et al., 2000)
"A tendency to relate their stories to ourselves" (Maister et al., 2000)	"Trusting in your ability to add value after listening, rather than trying to do so before listening" (Maister et al., 2000)
"A need to too quickly finish their sentences for them" (Maister et al., 2000)	"Taking responsibility for failed communications" (Maister et al., 2000)
"A need to fill empty spaces in conversations" (Maister et al., 2000)	
"A need to appear clever, bright, witty, etc." (Maister et al., 2000)	
"An inability to provide a direct answer to a direct question" (Maister et al., 2000)	
"An unwillingness to say we don't know" (Maister et al., 2000)	
"Name-dropping of other clients" (Maister et al., 2000).	

“A recitation of qualifications” (Maister et al., 2000).	
“A tendency to give answers too quickly” (Maister et al., 2000).	
“A tendency to want to have the last word” (Maister et al., 2000).	
“Closed-ended questions early on” (Maister et al., 2000).	
“Putting forth hypotheses or problem statements before fully listening to the clients hypothesis or problem statements” (Maister et al., 2000).	
“Passive listening: a lack of visual and verbal cues that indicate that the client is being heard” (Maister et al., 2000)	
“Watching the client as if he/she were a television set (merely a source of data) ” (Maister et al., 2000)	

Source: Maister et al., 2000.

You can test the trust equation and apply it to two situations you know. One situation where things worked really well and one situation where they did not. Give each of the components of the trust equation a score from 1-10. 1 being very poor, and 10 being very good. You can then calculate a trust score with the equation. Very likely you will see that the good situation will get a higher score. But you can now also see where things fell short in the other scenario.

2.2.4 Successful implementation

Because every team environment is unique and will have its own challenges and opportunities it is difficult to give cookie cutter guidelines for successful implementation. However, what we can do is to discuss a number of good practices that can be considered. Some of these practices have already been mentioned in the last two sections but we will expand on those in this final section.

Figure 3: What is needed to successfully implement a nutrition strategy

Source: Prepared by the author

There are three components to successful implementation of a strategy, its adoption, and sustainability. The first one is leadership which will be addressed at the end. The second one is facilitating or making it easy for players. Making sure that the right foods are available at the right times. Handing them a protein shake after hard training with the right amount of carbohydrate and protein, providing a carbohydrate containing meal after hard training, etc. However, avoid offering poor options at these times. By reducing the number of choices you can steer players to eat what you want them to eat. Of course, in an ideal world we want them to make their own choices and we want them to make the right choices even if they have a wide range of options in front of them. This is where the third component comes in: education. The combination of making it easy for the player and providing education at the same time is important especially for adopting of the plans.

However, in some environments there can be more focus on education and other environments it may be more important to make things as easy as possible and to limit choice. Education can take place while helping make it easy. You can tell players what they are getting, what the nutrition composition is and why this is the appropriate thing at that time.

You can find 10 more points below that will contribute to a highly successful implementation:

1. Start at the finish.
   Imagine the end point. What is it that you would like to achieve? What is the ultimate goal? At the start of a project it is important to identify the goal in a discussion with all stakeholders. It is essential that everyone agrees on this goal. Then it is possible to work back. What is

needed to achieve this goal? (for example reduce the number of injuries during the winter months). What should we be able to do? (for example recover faster, have more players available.)

Next, where are we now? (for example, last season we had x number of preventable injuries and key players were unavailable for x number of minutes because of injury or illness.) What will we need to close the gap between what is required and where we are now? (we need fewer illnesses and fewer preventable injuries). How can we realise this? (It might be possible to change the way that the team trains but we can also support the training better with nutrition so that we reduce the chances of illnesses, optimise recovery, and reduce the number of injuries). And once there is a clear plan: start to execute it. (The plan can be quite extensive and it may require changes in all meals, in the feeding around matches and hard training; it could involve taking protein before sleep and supplementation.)

This approach to making a plan, starting at the finish, can be applied to an individual level but also to a team level. If this discussion takes place at the team level, it is usually an interdisciplinary team approach.

2. Back to basics

Sometimes it is essential to go back to basics. Always ask the question: what is really important? What factors really determine performance? How can nutrition affect these factors? Sometimes this gets forgotten and various interventions or supplements are used simply because they are available; they can be used or others use them. Make sure there are clear arguments and try to solve things with food first.

3. Structured approach and process

It is important to bring structure and process into the implementation. Gather information, work on the basis of carefully collected data. If data is not collected or randomly collected without a structure or process, it is difficult to make informed decisions. Essentially this means using a scientific approach to making all decisions.

4. Marginal gains

Although sometimes the term “marginal gains” is disliked or criticized, the reality is that small improvements can add up! It is not rocket science: The more things you do right, the greater the chances of success. It is therefore essential to understand the factors that contribute to success and the factors that are barriers or risks! Then strategies need to be developed to mitigate the risks, remove the barriers and optimize everything for performance. Such strategies often involve support staff from multiple disciplines that need to work together. Very often there are more things that can be done than there are people to make them happen. This simply means that there needs to be a process of prioritizing that compares the potential gains of each

of the suggested interventions. A risk-costs and risk-benefit analysis needs to be carried out. If the costs (time, resources, manpower) outweigh the potential benefits, we should focus elsewhere. In our experience, however, a lot can be gained by simply adding work to make things happen. Many teams will have great ideas, great knowledge and maybe even great strategies but it is making such strategies work where many fall short.

Here are two examples. One from cycling (the Tour de France) and one from football. Cyclists ride with water bottles on their bike to hydrate and fuel. Two bottles are a little over 1kg. It can be calculated that when riding uphill, more energy is required. Conversely, for the same amount of energy spent, you can ride a little faster. Are these large differences? No they are not, they are small. But there are mathematical models that show that in a climb of 30 min having an extra kg can cost a handful of seconds. Is this important? Well, if you lose a time trial by 1 second you probably say, "yes, it is". But more significantly, during a stage in the Tour de France, riders have to climb several mountains and they are on their bike for hours. At the end of the day, having saved a small amount of energy during the day can make a big difference. One way to do this is by simply not using bottles. There is a huge risk attached to this and that is inadequate fuelling and dehydration, which could have a disastrous effect on performance. So, a strategic plan can be developed to make sure riders still get their bottles but don't have to carry them. Sometimes this can be done from the team cars by team mates, but sometimes this is not an option. Therefore, teams could have people along the course to hand out bottles so that riders can drink and get rid of the bottles. Many teams decide that this is not viable. It is a lot of effort to get people spread out over the course to hand the riders these bottles. Although the vast majority of cycling teams may think it is a good idea, very few actually make the effort to have people spread out along the course. The idea falls short at the very last hurdle.

In football we can see this for example at half time. We have evidence to show that carbohydrate feeding during the match can help performance (this is discussed in more detail). There is a range of products/foods that can be used to deliver this carbohydrate. Before the match and at half time players are pre-occupied with many other things apart from nutrition, so we need a strategy to help them fuel well. One such strategy could be to have one person responsible for handing the players what they need. This could even be personalized. For one player this could be a chocolate flavoured gel, for another a banana, etc. In reality this does not often happen. Why? There is not a dedicated person who does this and convinces players that this is important. Again, many teams have the knowledge and they have the idea, even provide some options. However, without the last step of someone being responsible for making sure players actually ingest the recommended amounts of carbohydrate, the strategy and the plans

are pointless. Of course the ideal scenario would be to have very well educated players who understand the benefits and do not need to be told. This education is also often overlooked, or it is delivered as a one-off.

5. The CORE principle

CORE is an acronym that was used by Cycling Team Sky's general manager Dave Brailsford to explain how success would be achieved: Commitment + Ownership + Responsibility = Excellence. Brailsford was very successful in innovating within a relatively conservative sport. CORE meant demanding from people to have an intrinsic drive towards achieving a goal (commitment), people who take ownership of their training and development, and responsibility for their performance.

6. Clarity

Clarity is a basic principle that should be met in many work situations, but often it is something that does not receive enough attention.

7. Trust equation

The trust equation was discussed above. Increase trust and understand trust by working on its 4 components. The 4 components of this equation are: credibility, reliability, intimacy, and self-orientation.

8. Underpromise – overdeliver

Reliability is one of the components of the trust equation. It is one of the easiest to control because it just means that you deliver what you promise. We often see practitioners overpromise and underdeliver but if you promise something and subsequently overdeliver this will go a long way with the athletes/players you work with. They will get the feeling that you will go out of your way to help them.

9. Manage the triangle of change

For any change in behaviour to occur there are 3 conditions that need to be met. The first one is commitment. Without commitment it will not be possible to achieve the goals set. For example, if a player needs to lose some weight, this can be achieved if the player wants to lose weight and is committed to achieving this. This is linked to belief. If the player does not believe that the weight loss is going to make him/her play better, have fewer injuries, or the players does not believe that the weight loss can be achieved, chances of success are minimal. Finally, what often drives commitment and belief is suffering. If the player does not suffer and does not experience any negative effects of a bit extra weight, it will not result in change. Suffering in football is often related to injuries. If players cannot play for several weeks this is suffering that may actually lead to change. It is well known that injured players are more willing to change. Rewards can also be used instead of suffering...

there need to be an incentive, whether this is stop suffering or some other reward that is meaningful to the player.

10. Process

How often do you sit as a team (supporting staff) and review how you are performing together – examining what's working and not working? Too often we focus on what is being done as opposed to how it is being done.

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